

**REMARKS**

The Advisory Action indicates that the Response filed on November 10, 2005 was not entered because the limitation to the configuration of the dispensing tips is a new issue and that the deletion of the language regarding pressurization is a new issue. Accordingly, the present response is being filed in conjunction with a Request for Continued Examination (RCE) and Applicants request entry of the amendment.

Claims 1 and 3 have been amended. Claims 2 and 19-71 have been canceled. Claims 72-85 have been added. Subsequent to the entry of the present amendment, claims 1, 3-18 and 72-85 are pending and at issue. These amendments and new claims add no new matter as the claim language is fully supported by the specification and original claims.

**I. Rejections Under 35 U.S.C. § 103(a)**

Claims 1-18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Downs et al. (2002/0153055) in view of Peck et al. and/or in view of Krug et al. This rejection is moot with regard to canceled claim 2. Applicants have amended claims 1 and 3. Applicants respectfully traverse this rejection.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify a reference or to combine the teachings of multiple references. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all of the recited claim limitations. Of course, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure.

The Office Action alleges that "Downs teaches a support frame (table-like platform on which the dispenser is mounted), a dispensing module 35, 30, 25 and a moving platform 50 for supporting plates (Fig. 1, [0017], elsewhere). The fluid dispensers include at least two supporting dispensers, optionally in a plurality of linear arrays [0011]."

Applicants respectfully disagree with the Office Action's interpretation of Downs et al. A closer reading of Downs et al. discloses "systems for simultaneously producing multiple fluid mixtures in *multiple* multiwell plates." ([0047], emphasis added). Indeed, throughout Downs et al. it indicates that the system is used with multiple multiwell plates. At paragraph [0011] referenced in the Office Action, it states that "the array includes at least two fluid dispensers that are spaced at least a sufficient distance apart to simultaneously dispense a fluid into a well of a first multiwell plate and a corresponding well of a second multiwell plate when both plates are placed beneath the array of fluid dispensers" (see also Figs. 3-5). It is clear that Downs et al. requires at least two multiwell plates. The addition of Peck et al. and/or in Krug et al. does not cure this defect.

In contrast, the present invention relates to a method and apparatus for delivering multiple reagents into a *single* multiwell plate (emphasis added). Applicants have amended claim 1 to clarify that the fluid delivery subsystem includes dispensing tips collectively arranged in a rectangular array configured for dispensing into wells of an assay plate. Accordingly, the prior art fails teach or suggest all of the recited claim limitations.

The Office Action further asserts that it would have been "obvious to one of ordinary skill in the art to attach the dispensing module to the frame in order to provide a stable arrangement, e.g., to ensure that the dispensing module maintains the proper relative positioning with respect to the moving platform 50 as was known in the art. It would have been further obvious to make it removably attached, including the use of quick release clamps, in order to facilitate assembly and disassembly for moving, cleaning and/or part replacement or repair as was known in the art".

The Applicants respectfully disagree with this statement. Nowhere in the prior art, separately or in combination, is there disclosure of a dispensing module that is removably attached to the support frame or that the dispensing module comprises a self-contained pressurized fluid delivery subsystem, as required in amended claim 1. Downs teaches "a linear array of fluid dispensers in which the linear array includes a number of fluid dispensers that is greater than the number of wells in a line of wells (e.g., a row or column of wells) of a single multiwell plate, which line of wells is

parallel to a longitudinal axis of the linear array” (Downs, paragraph [0012]). Downs et al terms this as a “massively parallel fluid dispensing system” capable “of simultaneously delivering multiple fluids to multiple wells in multiple microwell plates. In a preferred embodiment of a massively parallel fluid dispensing system of the invention, for example, the system includes a linear array of 96 fluid dispensers, each of which fluidly communicates with a different fluid container, such that as many as 96 different fluids can be dispensed simultaneously to 96 different wells disposed in, e.g., 8 or 12 different 96-well multiwell plates depending upon the orientation of the plates relative to the linear array” (Downs, paragraph [0042]). With this large array of fluid dispensers capable of dispensing into multiple multiwell plates, it is unlikely that a person skilled in the art would combine this large number of fluid dispensers into a removable dispensing module, as describe in the present application. There also may not be a reasonable expectation of success of modifying the prior art to make a removable dispensing module with an array as large as the one described in Downs et al. The addition of Peck et al. and/or in Krug et al. does not cure these defects.

In the Advisory Action the Examiner disagrees with the Applicants reasoning above and states that “it is reasonable that such arrays are supported in some way, and that the support is e.g., bolted to the apparatus frame. Further, tube array 23 is also fitted into a tube moving device. Together, the pump arrays and the tube array constitute in instant module.”

Again, Applicants respectfully disagree. Nowhere in Downs et al. is there any indication of a module, as disclosed in the present application, or that the module is removably attached to anything. Each of the components in Downs, i.e., the tube array 23 of tubes 25, tube transport 30 fluid source 35, are part of the overall dispensing system 20 and there is no suggestion that *any* of these components are “removably attached to the support frame”, as required the claim 1.

In addition, the present invention is not directed to removing components for cleaning or part replacement, as suggested by the Office Action, instead the present invention replaces the entire dispensing module. The present invention uses a dispensing module that is a self-contained pressurized fluid delivery system that is adapted for complete and reproducible attachment to or

detachment from the support frame, thus avoiding cumbersome manipulation of reagent containers and/cleaning of the components between tests. The “replacement of reagent hardware may be necessary to avoid contamination of liquid samples from previous reagents that remain in the fluid paths, or the unnecessary mixing of reagents that remain in the fluid paths, or the unnecessary mixing of reagents that could result in inappropriate reagent ratios leading to inaccurate results.” “The detachable dispensing module 10 of the present invention avoids these problems by enabling replenishment or replacement of reagents 50 for continued or subsequent testing, without requiring the cumbersome and inefficient disconnecting and reconnecting, or flushing, of fluid paths, reagent containers 25, and other associated equipment. Instead, the entire self-contained pressurized fluid delivery subsystem 20 may be easily and efficiently replaced, and only the single air supply line 120, along with any necessary electrical connections, must be reconnected upon replacement of the dispensing module 10” (paragraphs [0048], [0049]).

The Advisory Action states that the “Applicant has not contested the examiner’s position that it is reasonable to make each part removable for cleaning and replacement, and the arrays are parts or components.” Applicants respectfully disagree with this position and do not agree that cleaning of components make the components “removably attached to the support frame”.

Nowhere in the prior art references cited, either separately or in combination is there suggestion or motivation to have a dispensing module removably attached to the support frame, as disclose in the present invention. Accordingly, Applicants respectfully request withdrawal of this rejection.

### **III. New claims 72-85**

Applicants have added new claims 72-85. Independent claim 72 is a combination of current claims 1, 3, 7 and 13. Dependent claims 73-86 are the same as original claims 4-6, 8-12 and 14-18. These claims should be allowable over the prior art for at least the same reasons given above for the pending claims. These new claims add no new matter as the claim language is fully supported by the specification and original claims

In the Application of:  
Coassin et al.  
Application No.: 10/789,183  
Filed: February 26, 2004  
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Attorney Docket No.: AURO1420-1

**IV. Conclusion**

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

A check in the amount of \$455.00 is enclosed as payment for the Request for Continued Examination fee and the One-Month Petition for Extension of Time fee. Applicants do not believe any other fees are due in connection with this Response. However, the Commissioner is hereby authorized to charge any fees that may be associated with this communication, or credit any overpayment to Deposit Account No. 07-1896, referencing the above-identified attorney docket number. A duplicate copy of the Transmittal Sheet is enclosed.

Respectfully submitted,

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Lisa A. Haile, J.D., Ph.D.

Registration No.: 38,347

Telephone: (858) 677-1456

Facsimile: (858) 677-1465

DLA PIPER RUDNICK GRAY CARY US LLP  
4365 Executive Drive, Suite 1100  
San Diego, California 92121-2133  
USPTO CUSTOMER No. 28213